

ETHNOBOTANY OF THE LISU IN THAILAND

Holly Sellers, PhD

La Trobe University, Melbourne, Australia

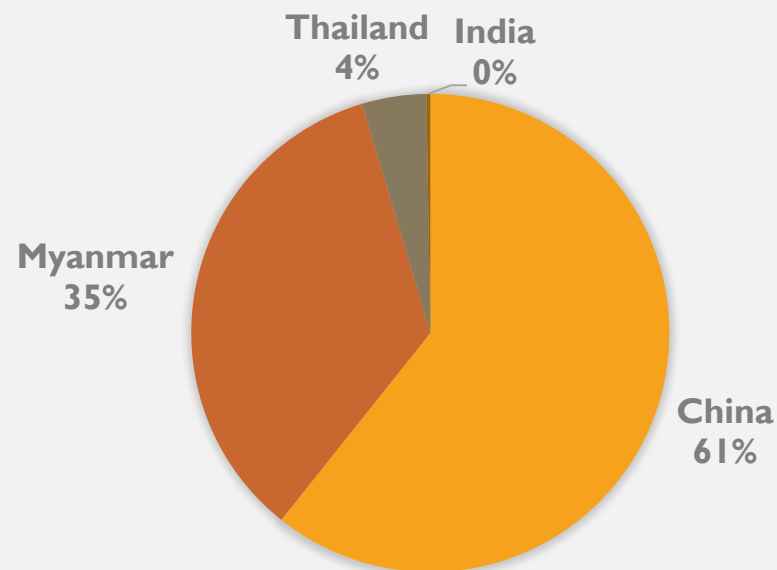
OUTLINE

- 1 – The research project
- 2 – Lisu folk taxonomy
- 3 – Metonymy & metaphor in Lisu plant names

LISU PEOPLE & LANGUAGE

- Tonal language: Tibeto-Burman, Burmic branch, Ngwi group
- 3 main mutually intelligible dialects:
 - Southern, Central, Northern
- 2 main scripts in use:
 - Fraser script (used here)
- More than 1 million speakers
 - Some are literate in a Lisu script but many are not.
- Traditional plant knowledge at risk of being lost.

LISU SPEAKERS BY COUNTRY





LISU PLANT USE

- **Farming:**
 - mostly rice and corn, but also cabbage, cucumber, coffee
- **Foraging:**
 - Food
 - Medicinal
 - Spiritual e.g. for rituals
 - Whisky making
 - Exchanging varieties with other ethnic groups
- Lisu plants are related to spiritual traditions and physical wellbeing!



THE RESEARCH PROJECT – PHASE I

- PLANT & PLANT NAME COLLECTION
 - Informal walks around the villages
 - Recorded Lisu plant names and uses
 - Took notes on all information
 - Took photographs/some video
 - Pressed and dried samples of the specimens
 - Recorded GPS co-ordinates
 - Used linguistic, anthropological and botanical theory & practices as a basis for the research

THE RESEARCH PROJECT – PHASE 2

- **COGNITIVE TAXONOMIC CATEGORISATION**
 - Used previously collected dried plant samples
 - Plant sorting activities to find folk taxonomic categories: ‘What kind of plant is this?’, ‘Does this plant belong with this other one or are they different?’, ‘How would you put these plants together in groups?’



ADDITIONAL DATA & ACTIVITIES

- Collected, transcribed and translated a number of extended narratives involving plants
- Collected uses, including medicinal where relevant, and scientific IDs for most of the 300+ plant names
- Returned a photobook with a selection of the plants, including CD audio of the Lisu names, to each of the communities in early 2016 (self-funded trip)

CONSIDERATIONS

- **Spiritual beliefs**
 - Animist Lisu believe medicinal or special/important plants will 'hide' or lose their potency if they are shown to wrong person
 - Limits what can be collected and what is ethical to collect
 - Christian/non-animist Lisu do not hold this belief...
- **Plant related ethics**
 - How will villagers' intellectual property be protected?
 - Dried plants are stored in a herbarium – preventing loans may be necessary
 - GPS coordinates of individual plants are not included in the thesis and access is currently restricted

SCIENTIFIC TAXONOMY

E.g. *Helianthus annuus*



"A sunflower". Licensed under Public Domain via
Wikimedia Commons -
http://commons.wikimedia.org/wiki/File:A_sunflower.jpg#mediaviewer/File:A_sunflower.jpg

Kingdom: Plantae

Phylum/Division: Magnoliophyta

Class: Magnoliopsida

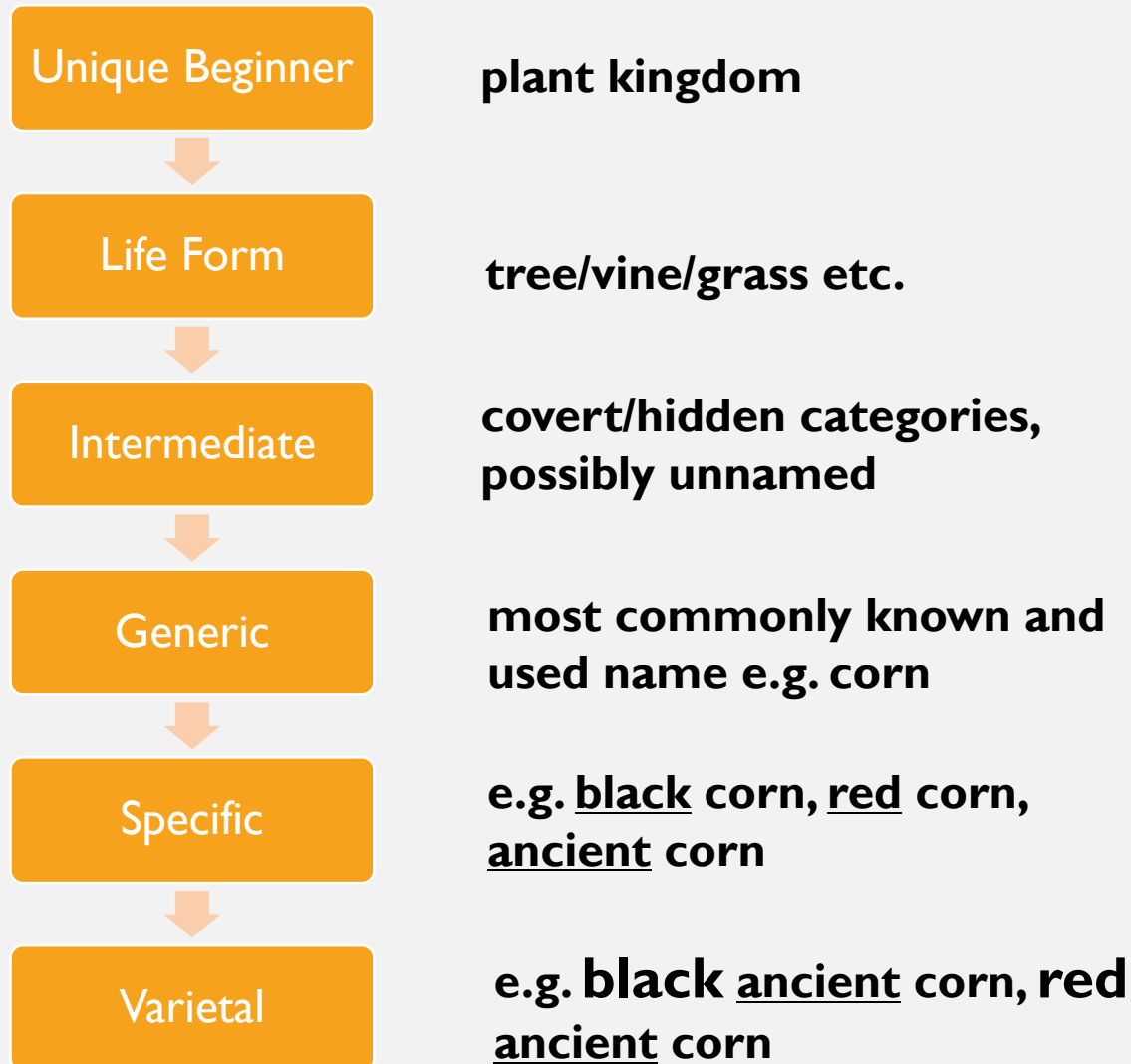
Order: Asterales

Family:
Asteraceae

Genus:
Helianthus

Species:
annuus

FOLK TAXONOMIC HIERARCHY – BERLIN (1992)

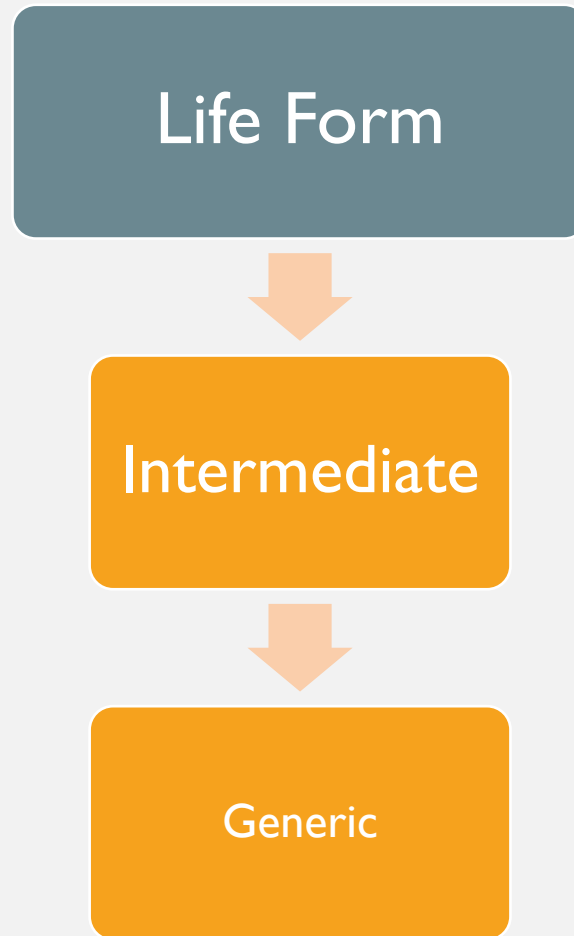


LISU TAXONOMY – UNIQUE BEGINNER?

- Word for ‘Plant Kingdom’ (for some speakers only)

| | | | |
|-------|-------|-------|-------|
| sl, | zl., | lo., | zl., |
| /sɿ/ | /dzi/ | /lo/ | /dzi/ |
| thing | tree | thing | tree |

FOLK TAXONOMY – LIFE FORMS



POSSIBLE LIFE FORMS: SHORT NAMES

YI. ZI.,

/jɪ dzɪ/

tree/tree-like (polysemous with 'stem')

YI. F..

/jɪ tsɿ/

climber/vine/creeper

YI. PO..

/jɪ pɔ/

multiple stems from a central point/shrub-like

MO;

/mɔ/

weed/grows low to the ground

WO: and WO: XŃ: WO: JE:

/wò/ and /wò ʃɪ wò dzè/

vegetable/edible thing

XŃ.

/ʃɪ/

grass (specifically, grass blade)

POSSIBLE LIFE FORMS: LONG NAMES

SI, ZI., LO., ZI.,

Tree-like kinds of things

/sǐ d̥zi lo d̥zi/

MO; XŃ: MO; JE:

Weedy/herbaceous kinds of things

/mò ʃi mò d̥ʒè/

WO: XŃ: WO: JE:

Food/edible kinds of things

/wò ʃi wò d̥ʒè/

SI, WE.. LO., WE..

Flowering kinds of things

/sǐ wē lo wē/

WHICH LIFE FORM?



WHICH LIFE FORM?



LISU LIFE FORMS

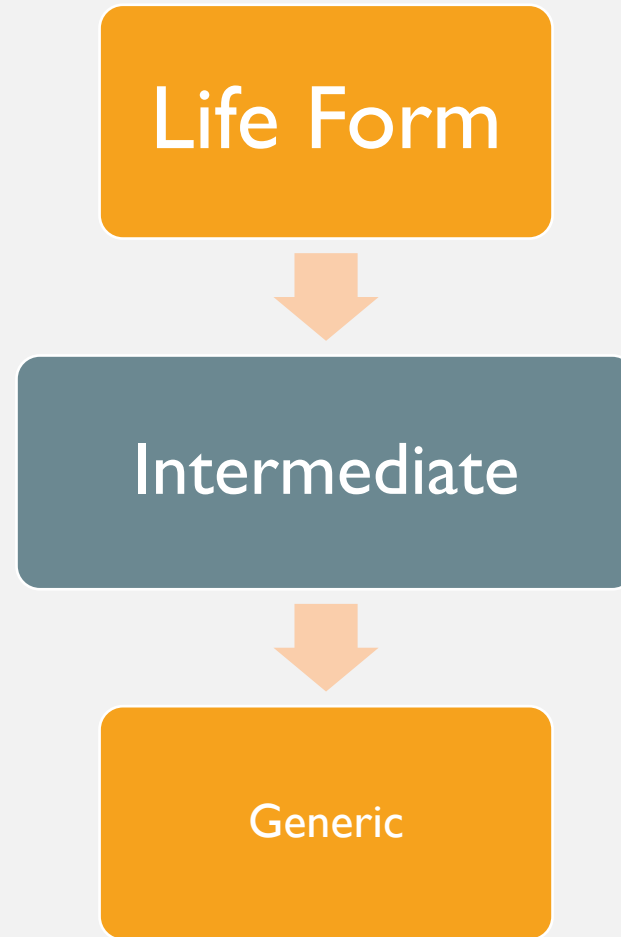
| English Approximation | Lisu short name Life Form | Lisu long name Life Form |
|-----------------------|---------------------------|--------------------------|
| tree | YI. ZI., | SI, ZI., LO., ZI., |
| shrub | YI. PO.. | SI, PO.. LO., PO.. |
| weed | MO; | MO; Xŋ: MO; JE: |
| climber/vine | YI. F.. | NI., GU: F.. |
| vegetable/edible | WO: | WO: Xŋ: WO: JE: |
| grass | Xŋ. | |

NI., GU: F.. = vine or creeper-like things (NI., GU: = ribs, F.. = string-like)
 /ni gù tsá/

LISU LIFE FORMS - SUMMARY

- **Recognised** in Lisu and can be produced when questioned with, “What kind of thing is this?”
- **Not immutable properties** of a given plant; there is a degree of **flexibility** in their use for some specimens.
- The Life Form of an individual plant **can change** according to **what element of that plant is being focused on**.
- Can think about it in terms of cognitive plant **prototypes**

LISU TAXONOMY – INTERMEDIATES



LISU INTERMEDIATES – DO THEY EXIST?

- Berlin (1992) – Intermediates contain plants **morphologically similar** to each other, related to each other.
- BUT Lisu people grouped plants into **use-based categories**, not morphologically similar categories...

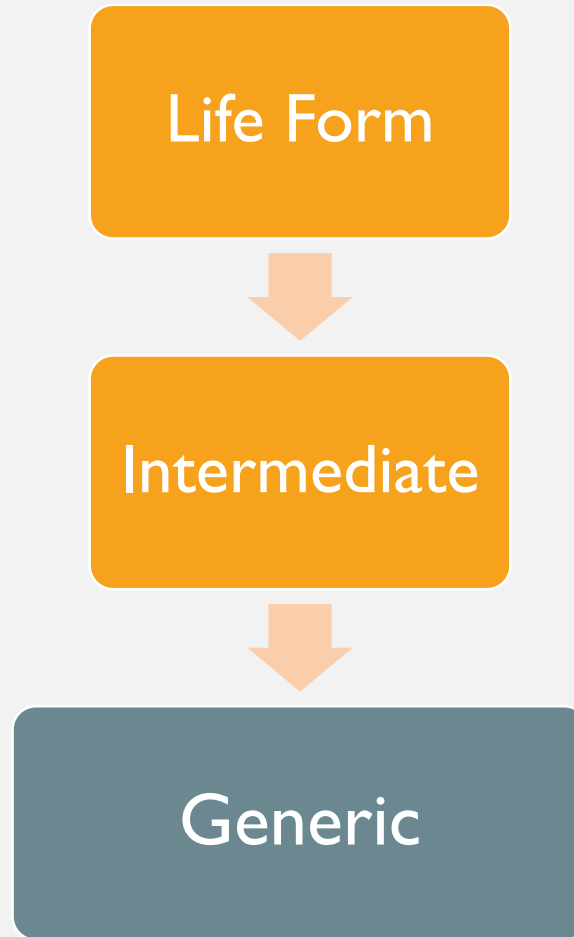
USE-BASED CATEGORIES (AS CHOSEN BY LISU SPEAKERS)

- edible tree bark and shoots but also with a useful trunk for other things
- edible shoots and leaves
- edible fruits but the trunk is useless
- edible fruits (only) but the trunk is useful for building houses
- for building houses
- for medicine
- for firewood
- thorny but useless

LISU INTERMEDIATES

- Berlin (1992) does not like use-based, ‘cross-cutting’ categories as candidates for Intermediates.
- Use-based categories align more closely with Hunn (1982) but would leave us without a convenient analytical framework that can be used cross-linguistically/culturally.
- Using Berlin’s hierarchical framework, either Lisu does not have Intermediates or else Berlin’s definition needs to be expanded to include use-based categories.

FOLK TAXONOMY – GENERICS



(7)

A. ၁၈;

ME: FI..



/átʃ^hɪ/

goat

/mè tsi/

beard



(8)

X၈. P၇; -L၇;



/ʃí/

/pùu lùu/

grass curly

(5)

A.-Λ; -M..

WU.-ʒI..

KW; KW;



/á nà ma/

/wú ts^hi/

/kwà kwà/

female buffalo

horn

reversed



(6)

A. NYI: VE; M..

ZI.,

/á nì/

/hè ma/

/dzi/



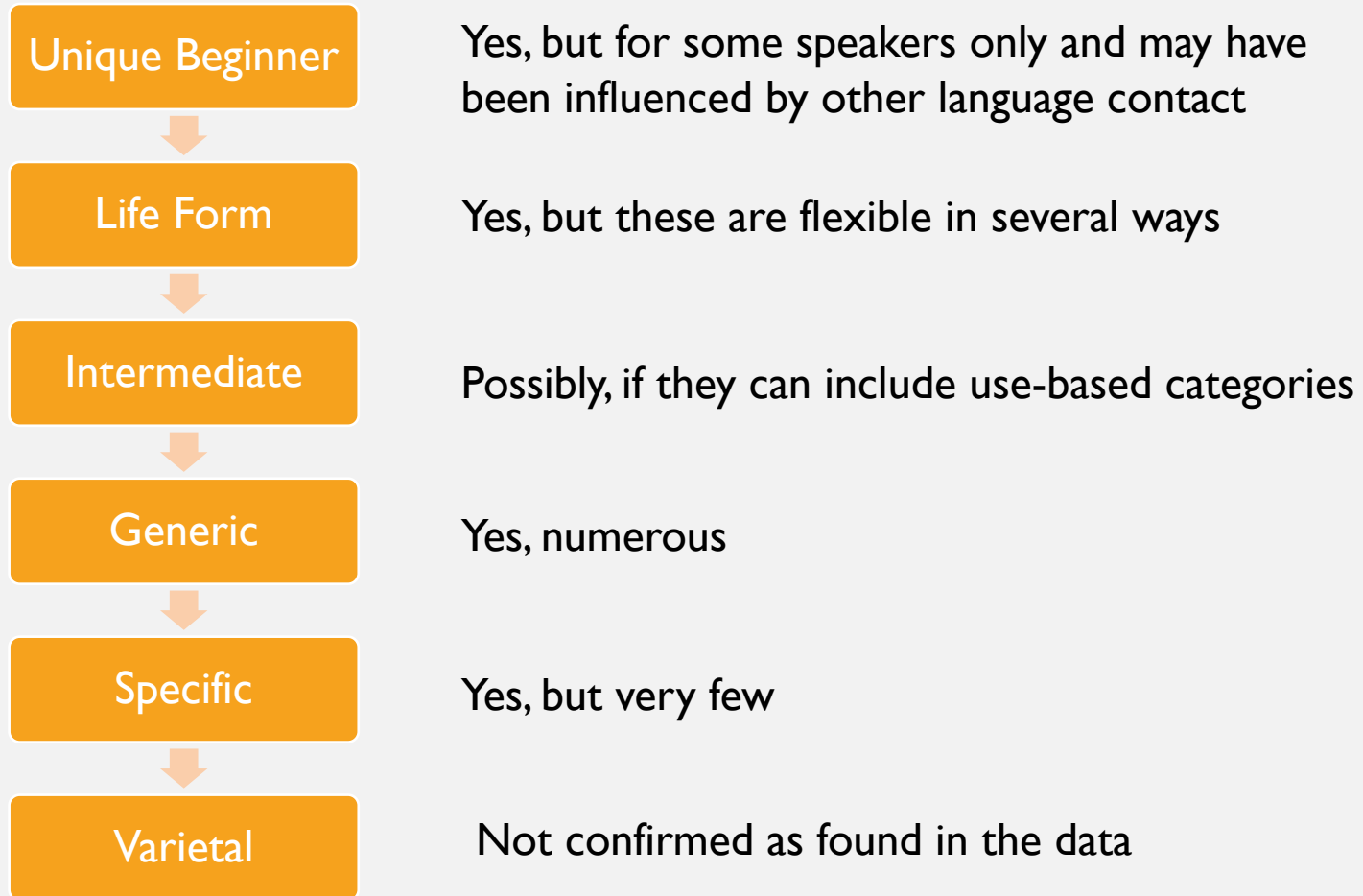
cow

stomach

tree

“Jackfruit”

BERLIN'S FOLK TAXONOMY FOR LISU



LIMITATIONS OF BERLIN MODEL

- Makes generally valid points but:
 - presents his work as though it applies to all folk taxonomies, the exceptions to these are many but are almost hidden as footnotes
 - ‘residual taxa’ category is a convenient way to group things that don’t fit the model
- From the Lisu data:
 - some parts fit but some do not or only partially fit
 - common tendencies in how the natural world is categorised by human are not unbendable rules
 - can be used as a starting point/framework by which to consider the examination of an unexplored folk taxonomy
 - cultural factors may be more cognitively salient for grouping purposes than similar morphological features of plants

METAPHOR & METONYMY

- **Metaphor:**
 - one conceptual domain is understood through another – a whole schematic structure, containing more than one element, is mapped onto another
- **Metonymy:**
 - a cognitively salient, highly recognisable part of something is used to represent the whole or another aspect of that thing
- Metaphor and metonymy can also be mixed to create composites of the two types, which can create confusion as to how to define a compound as one or the other.

METAPHOR/METONYMY IN ETHNOBIOLOGY

- Turpin (2013) explores metonymy and metaphor in polysemous plant and animal names in the Australian indigenous language Kaytetye
- Finds semantic extensions that exist in the language for polysemous flora and fauna terms including:
 - **visual metaphor:** shape, texture, colour and pattern
 - **metonymy:** salient body part, spatial, seasonal, behavioural, diet, sound, human influence, kin-based commemorative, sign, and the newly discovered 'meaningful call' metonymy, where a bird call signifies a particular associated phenomenon

METAPHOR/METONYMY IN LISU

- Lisu plant names can be semantically categorised by:
 - **Visual metaphor**
 - Many are body parts of animals
 - **Metonymy**
 - Uses by, and effects on, people and animals.
- 173 compound Lisu plant names appear to include some kind of metonymy or metaphor
- Examples presented are based on as much detail as was available from plant consultants when explaining the names given for plants

METAPHOR/METONYMY IN LISU

- **Metaphor** – visual metaphor only
 - a similarity between the whole plant and/or object
 - or between just one part or aspect of the plant and/or an object
- In Lisu found metaphor examples of mostly shape, only a couple for colour
- **Metonymy** – several types found
 - Visual – shape, colour, hairy/non-hairy etc.
 - Behavioural
 - Sensory – taste, smell, sound
 - Use/effect – by and on humans (especially medicinal) and animals
 - Spatial
 - Kin based
 - Other ethnic groups
 - A special case

LISU PLANT METAPHOR – SHAPE & COLOUR



| | | |
|---------------|------------|-------------|
| A. LU: | MV. | ZI., |
| /á lù/ | /mæ/ | /dzi/ |
| pot | soot | tree |

Craibiodendron stellatum



| | |
|---------------|----------------|
| Y: 3U: | WU. P7. |
| /zà tʃʰɿ/ | /wú pú/ |
| orphan | comb |

'orphan's comb' (*Himalaiella peguensis*)

LISU PLANT METONYMY – VISUAL



ᵐᵛᵛ ᵐᵛᵛ; xᵛ: xᵛ:

/næ tsʰᵛ/ /ʃᵛ ʃᵛ/

medicine red

red medicine

Ixora cibdela, Desmodium multiflorum



ᵐᵛ:

ᵐᵛ: ᵐᵛ:

/tsʰᵛ/

/bè lè/

thorn

hairy

Rubus blepharoneurus

LISU PLANT METONYMY - BEHAVIOURAL



M1:

/mù/

weed, herbaceous plant⁴⁵

'shy weed' (*Mimosa pudica*)⁴⁶

S. TO..

/sá tɔ/

shy



M1; X1;

/mù k^hù/

night

Ligustrum confusum

SI, WE..

/sǐ wɛ/

flower

LISU PLANT METONYMY

Taste

| | | |
|---|-------|---------------|
| CE.. | B; | XU: |
| /tʃɛ/ | /bà/ | /kʰù/ |
| sour | cheek | inside/hollow |
| <i>Cyathula prostrata</i> var. <i>prostrata</i> | | |

Smell (May Chang)

| | | |
|----------------------|----------|-------|
| SI, | XO. | ZI., |
| /sǐ/ | /ʃó/ | /dzi/ |
| wood | aromatic | tree |
| <i>Litsea cubeba</i> | | |

Use

| | | |
|--------------------|---------------|-------|
| BY: | WU. | ZI., |
| /bjà/ | /wú/ | /dzi/ |
| bee | feeling faint | tree |
| <i>Inula cappa</i> | | |

Effect

| | | |
|--------------|--------|-------|
| FI.. | CE, | ZI., |
| /tsi/ | /tʃʰě/ | /dzi/ |
| type of tree | itchy | tree |

LISU PLANT METONYMY – USE (MEDICINE)

NV.. ɬl; Xŋ: Xŋ:

/næ ts^hɿ/ /ʃɿ ʃɿ/

medicine red

'red medicine' (*Ixora cibdela*, *Desmodium multiflorum*)

WO: dl., F..

/wò dl/ /tsɿ/

kidneys vine

Kadsura heteroclita

NV.. ɬl; D: M.,
/næ ts^hɿ dà ma/
medicine-big



LISU PLANT METONYMY – OTHER TYPES

- Animals (spatial metonymy)
- Sound
- Kin-based
- Other ethnic groups

LISU PLANT METONYMY – SPECIAL

- One case contains three types of metonymy: animal use or spatial, behavioural & visual

Tl; Tl;

/tì tì/

(a kind of) bird

Viscum ovalifolium

Sl,

/sǎ/

‘creeping around other trees’

Wo:

/wò/

wood

xl.,

/k^hɯ/

untidy

LISU PLANT NAMES – SUMMARY

- Can see that all sorts of information can be encoded in Lisu plant names!
- In non-literate society can help speakers store/remember information about and uses of plants
- Results roughly match those of Turpin (2013) with some extras/some missing – would be good to get more data from other languages

IMPLICATIONS

- Why collect the data/undertake the project?
- What to do with the data now, given the ethical considerations?
- How to get community involved in keeping and adding to this body of plant knowledge? What is the most valuable format for them?

ACKNOWLEDGEMENTS

- Emeritus Professor David Bradley, La Trobe University (main thesis supervisor)
- Birgit Hellwig, co-supervisor
- Lisu Translators and Research Assistants: Mimi Saeju, Ahkhi Nawyawheh, David Ngwaza
- All the Lisu plant experts and villagers who assisted with the project.
- La Trobe University Herbarium (LTU) Herbarium – Alison Kellow
- Chiang Mai University (CMU) Herbarium – (the late) James Maxwell
- Chiang Mai University, Ethnobotany Department – Aj. Angkhana Inta, Prateep Panyadee, Kamonnate Srithi, Natcha Sutjaritjai.
- Payap University, Chiang Mai, Thailand – Aj. Phinnarat Akharawatthanakun & Art Cooper
- National Research Council of Thailand

Funding Sources:

- La Trobe HUSS SRE Grant 2012 (field work 2012)
- 2012 Thai Studies Field Research Grants, administered by the Asia Institute at the University of Melbourne (field work 2013)
- La Trobe University IRGS Grant 2014 (translation/transcription)
- La Trobe University Linguistics DRP Grant 2014 (translation/transcription)
- La Trobe University Linguistics DRP Travel Grants for attendance at ICLDC 4 (2015) and ICLDC 5 (2017)

REFERENCES

- Berlin, B. 1992. *Ethnobiological Classification*. New Jersey : Princeton University Press.
- Bradley, D. 2005 . *Southern Lisu Dictionary*. Berkeley, CA : STEDT Monograph 4, University of California.
- Bradley, D. with B. Loto and D. Ngwaza. 2008. *Lisu New Year Song*. Thailand: Actsco Publishing.
- Evans, N. (1997). Sign metonymies and the problem of flora-fauna polysemy in Australian linguistics. In D. Tryon & M. Walsh (eds.) *Boundary Rider: essays in honour of Geoffrey O'Grady*, (pp. 133-153). Canberra: Pacific Linguistics, The Australian National University.
- Hunn, E. 1982. *The Utilitarian Factor in Folk Biological Classification*. American Anthropologist, New Series, Vol. 84, No. 4 (Dec.), pp. 830-847.
- Turpin, M. 2013. *Semantic Extension in Kaytetye Flora and Fauna Terms*. Australian Journal of Linguistics 2013, 33(4), 488-518.

BONUS SLIDE – LISU HANDICRAFTS & CULTURE

- For information on hand-made Lisu handicrafts and where in Chiang Mai to visit the Lisu Cultural Center, please visit Mimi Saeju's page:
 - <https://www.facebook.com/LisuPatchworkByMolazu/>
- For further information on the Lisu, archival pictures of Doi Lan by Otome Hutheesing and to hear some Lisu music, please visit:
 - <http://www.molazu.com>

